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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,999	03/17/2000	Shiri Kadambi	P108339-00002	3375

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EXAMINER

HOANG, THAI D

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/527,999

Applicant(s)

KADAMBI ET AL.

Examiner

Thai D Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 03/17/2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "programmable counter unit" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 5-6 are objected to because of the following informalities:

The statements "the counter unit" and "said counter unit" in line 1 of claims 5-6 respectively found no basic. Previous claims define a "programmable counter unit" only; therefore, the words, "the" and "said" on line 1 of claims 5 and 6 are grammatically incorrect

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not

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described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 3, the specification does not disclose any information to indicate a "remote CPU is used to program the programmable counter unit" as recited in claim 3.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 and 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The statement "programmable counter unit" in claims 1-3 and 6 is confusing because the specification and drawing do not define or show any element called "programmable counter unit".

Furthermore, the statement "a destination port which contains a path to a destination for the packet" in claim 1 is confusing. It is not clear how ***a destination port contains a path*** to a destination does.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being unpatentable over Hoffman et al, US Patent No. 6,094,435, hereafter referred to as Hoffman.

Regarding claim 1, as best understood, Hoffman discloses a system and method for a quality of service in a multi-layer network element. Hoffman discloses that the system (fig. 3) comprising:

a plurality of input ports 50 for receiving incoming data packets from a source and a plurality of output ports 56 for transmitting the received data packets to a destination corresponding to the address information in the header (a source port for receiving an incoming packet from a source; a destination port which contains a path to a destination for the packet)

Hoffman teaches in figure 8 that each output port comprises a plurality of queues Q_i of data packets having different priorities (col. 19, line 28 –col. 20, line 17), and the system counts a number of packets in each queue in order to determine transmit a packet to a destination or discard a packet if the queue Q_i exceeds a threshold value; col. 21, lines 48 – 65; col. 22, lines 23-63. Therefore, it implies that Hoffman's system

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comprises a counter unit for counting a number of packets, which are received by the switch.

Regarding claim 2, as best understood, Hoffman discloses a class logic 60 (fig. 4) that examines information in the packet header to determine any encapsulation information and to determine a class for the layer 3 information. The class logic 60 comprises a encapsulation logic 68 and the class action logic 70. The class logic 60 includes a class filters to determine any offsets into the packet to identify locations of relevant information; col. 12, lines 42-44; and the class action logic 70 determines to which class a packet belongs. A class is used by both the L2 and L3 logics to aid in searching and to add to the functionality of the multi-layer network element 12; col. 12, lines 56-59. Therefore, it indicates that Hoffman's system comprises a filter unit which parses selected fields of an incoming packet and compares the selected field to a table to determine whether the incoming packet is of a selected packet type.

Regarding claim 3, as best understood, the system disclosed by Hoffman comprises a processor 36 wherein a central processing unit coupled to the memory utilizes a computer program mechanism coupled to the central processing unit to modify the priority information based on an amount of packets being transmitted through one of the output ports; col. 5, lines 63-66. It implies that the CPU is used to control the counter unit. Hoffman does not explicitly teach that the switch 36 coupled with a processor 32 in the system disclosed by Hoffman inherently comprises an interface in order to allow the switch 36 transmit/ receives information to/from the CPU 32.

Regarding claim 4, the system disclosed by Hoffman comprises a forwarding memory 40 and an associated memory 42 (fig. 2) for storing incoming packets (an internal memory for storing first selected incoming packets therein); and a packet memory manager 54 coupled with a Packet buffer memory 44, wherein the packet memory manager 54 inherently comprises an interface in order to transmit/receive data packets to/from the packet buffer memory 44 (a memory management unit comprising an external memory interface for interfacing with an external memory, said external memory interface being configured to send second selected incoming packets to the external memory). Furthermore, Hoffman discloses in col. 9, line 9 – col. 10, line 13 and figures 3-4 the operation of the system, wherein the message information between input ports 50, output ports 56, packet memory manager 54, and packet buffer memory 44 are exchanged through a communication channel (a communication channel for communicating data and messaging information between the source port and the destination port, the internal memory, and the memory management unit)

Regarding claim 5, Hoffman teaches that the system forwards received packets from an input port to one or more output ports with quality of service. When output queues exceed or meet a threshold value below the queue's capacity packets are randomly discarded. When the queue becomes full, the network element determines which flow caused the queue to overflow; abstract; col. 21, lines 48-65; col. 22, lines 35-63. Therefore, it implies Hoffman's system comprises a rule table in order to control data packet flow of a selected packet type if the number of count packets exceeds a predetermined threshold value.

Regarding claim 6, as best understood, Hoffman teaches in figure 8 that each output port comprises a plurality of queues Q_i of data packets having different priorities (col. 19, line 28 –col. 20, line 17), and the system counts a number of packets in each queue in order to determine transmit a packet to a destination or discard a packet if the queue Q_i exceeds a threshold value; col. 21, lines 48 – 65; col. 22, lines 23-63 (counter unit is configured to provide separate counts of a plurality of different types of incoming packets, and take different action based upon different count values for the different packet types.)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to the application:

US Patent No. 6,246,680 B1, Muller et al disclose a system and method of highly integrated multi-layer switch element architecture.

US Patent No. 6,263 368 B1, Martin discloses a method of network load balancing for multi-computer server by counting message packets to/from multi-computer server.

US Patent No. 6,021,132 A, Muller et al disclose a method of shared memory management in a switched network element.

US Patent No. 5,909,686 A, Muller et al disclose a method and apparatus for providing hardware-assisted CPU access to a forwarding database.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Thai Hoang
August 7, 2003


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 8/8/03